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Giant single-type Yucca growing in the heart of the Sierra Madre.

Journal of the CACTUS & SUCCULENT SOCIETY of America

A monthly magazine devoted exclusively to Cacti and Succulents for the dissemination of knowledge and the recording of hitherto unpublished data in order that the culture and the study of these particular plants may attain the popularity which is justly theirs. "The Cactaceae," by N. L. Britton and J. N. Rose, has been adopted by this Journal for purposes of identification.

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Northern California Notes

Last month, the Cactus and Succulent Show acted as a powerful magnet to draw many a northerner southward. If any of the visitors hankered for the fog in the "unusual" weather of Pasadena, they did not show it, the sights to be seen amply compensating for an overconsumption of handkerchiefs.

Armed with pencils and notebooks, they made good use of their opportunities to see new plants. One could see them noting down names, or, if they thought they had better ones, mayhap starting one of those arguments so dear to the heart of the collector

Everybody went home with the conviction that the show was much more than worth the trip, and impressed with the energy, enterprise and good-fellowship of our southern friends.

Northbound cars were loaded to capacity with new acquisitions; fenders bristled with Agaves, runningboards were draped with Aloes, and Cactus spines were everywhere in evidence, so that one had to pick one's seat with care.

Among the visitors were Mr. and Mrs. Harney of San Mateo, Mr. and Mrs. Max Cohn of Los Gatos, Mrs. Spencer of Alameda, Mr. H. L. Bettencourt of San Leandro, Miss Katherine van Benthem of San Francisco, Mr. Weston of Tracy and James West of San Rafael.

THE CURIOUS YUCCA

By WILLIAM M. BRISTOL

Reprinted from Touring Topics through the courtesy of Automobile Club of Southern California

Summer brings to a close once more to the foothills and waste places of the arid Southwest the annual pageant of the yucca, known botanically as *Yucca whipplei*. I am not a botanist, yet ten years ago I made an interesting discovery in connection with the yucca in Cajon Pass—a fact which seems to be known by but one writer on Western wildflowers and which he has hidden in a word calculated to send nearly everyone to the dictionary. That word is "cespitose." This writer, in the course of his brief and, I doubt not, admirable technical descriptions of the plant, said,

"Sometimes simple, sometimes cespitose."

I may be guilty of less majesty, but I believe that botanist is wrong in trying to make one description fit two distinct varieties of yucca—a horrible thing for any self-respecting botanist to do. Again proclaiming myself a mere superficial observer, I now declare that one type of yucca, botanically "simple," produces but one flower stalk and then dies. The other type, botanically "cespitose," sends out offshoots around its base and goes on living indefinitely. The parent plant is the first to bloom; but each of the offshoots in time follows suit. Again fearing less majesty I shall speak of the two, respectively, as single and multiple. I do not believe that the seed of one ever produces the other, or vice versa. Having been an interested student of the yucca family for more than thirty years, I shall proceed to tell a simple story of some of my observations.

Like the so-called "century plants," the yucca is a long time coming into bloom—not a century by any means, but somewhere between fifteen and twenty years, varying because of different soil and climatic conditions. If asked to name seven wonders of Nature I would first mention those marvelous plants which, after a score of years of exceedingly slow growth, at last send up in a few weeks' time a magical plume of creamy white exceeding in volume and weight that of the plant producing it. In all the floral kingdom I know of nothing so spectacular.

I do not know how widely distributed are the two yuccas mentioned, my intimate acquaintance with them being confined to the southern portion of the vast county of San Bernardino, California. At the Highland foothills, where I have lived for forty years, only the single type is found; and I have observed the multiple type only in the region of Cajon Pass, where the two overlap each other. The latter is found up to 8000 feet elevation; but somewhere along the way the single type drops out of the pageant. There is, however, a variety of the single type growing in Prairie Fork, the northeastern branch of San Gabriel Canyon, which si obviously different from the single variety at Highland, the flower stalks being more than double the size and height. Once I split a number of these giant stalks, removed the pith and used the resulting troughs to conduct the water of a mountain spring into my camp.

In years of normal weather and rainfall the yuccas at the lower altitudes begin blooming in April and the pageant moves slowly and majestically up the slopes, ending late in June at the major elevations.

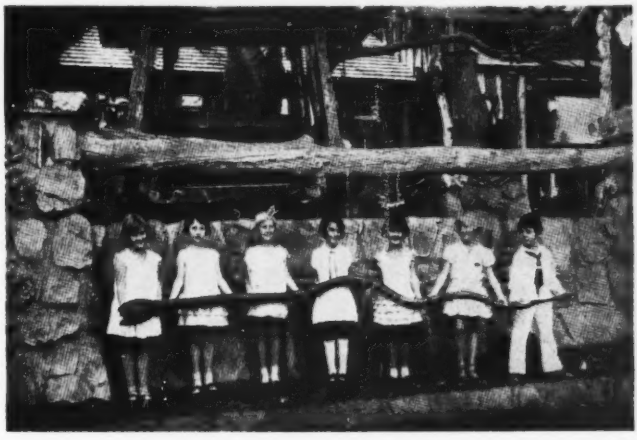
Referring again to the multiple yucca it is interesting to note that one plant frequently sends up two or more flower stalks the same season; and that these twins, triplets, or whatever the number, resemble each other in all respects and peculiarities. If one bends in a certain direction the others do the same. The student of nature will find interest in watching for these along the way. Twins and triplets are common; but never until last season have I seen five contemporaneous plumes from one plant, as shown in the picture accompanying these remarks.

Cutting of the yucca flower stalks is now prohibited by ordinance in several of the Southern California counties on the logic that prevention of maturing of seed would in time exterminate the species, and on the further argument that whisking them away from their native habitat on the running board of an automobile, to be turned over to the city rubbish man a day or two later, is a crime against Nature. The ancients dragged their captives home behind their chariots of war. The soft-shod chariots of the moderns should be in better business than making captives of these graceful plumes that have been called God's Candles, for they are nowhere so charming as in their native habitat. There can be no objection, however, to the various uses made of the dry stalks after they have ripened and dropped their crop of seed. Many loads of these have been hauled away by the motion picture people. Curiosity prompted me to ask the driver of a truckful what use was to be made of them. Said he, "Did you ever see one man in a picture maul another man over the head with a chair, breaking the chair all to pieces without even knocking the other man down? Well, that chair was made from the soft pith of these stalks. Did you ever see an automobile driven through the sides of a house? Well, that house was made of this same material."

Perhaps the stalks find a more dignified use and end as decorations in mountain cottages where they are much in favor for battens and borders on wall-boards. I have no apology for the 12-foot snake which adorns the wall of Acorn Lodge, my mountains house at Wrightwood; for it is simply a yucca stalk, bulbous base and all, which carried a heavier load of bloom than it could stand straight under. Half a dozen times it tried, like an old toper, to straighten up; but at last it ripened its crop and its fiber in its crooked attitude and gave up the ghost. It grew not ten feet from the Big Pines highway and I

was fearful that someone else would see the potential snake and make way with it before it was sufficiently ripened. Evidently, however, no one but myself was drinking the particular brand that produced the yucca snake vision. A friend has written a series of "House That B—Built" jingles to explain the forthcoming book of pictures of the rather unusual mountain house I am building; and the jingle that goes with this picture runs: "This is a Yucca, curved and tall; it never swam in the sea at all, but grew near the House that B— built."

One quotation from a botanical writer and I am done: "The flowers (of the yucca) are incapable of self-pollination, each yucca species being dependent upon a particular moth or species of Pronuba. The female Pronuba works by night, collecting pollen from the anthers and rolling it into a little ball. She then flies to the flower of another plant, deposits her eggs in the ovary, and then, in a manner seemingly full of purpose and deliberation, climbs to the style and thrusts the pollen ball down the stigmatic tube. The larva destroys about a dozen seeds; but even if several larva develop many perfect seeds are left."



Yucca stalk, contorted into the form of a snake

I soberly affirm, however, that I had been drinking nothing but mountain water when I saw the sight I am about to describe. When the new road to Big Pines was built three years ago a good many yucca plants paid the supreme penalty. One medium-sized plant was pulled out without injury to its bulbous base but minus most of its roots. This particular plant happened to be thrown on top of a pile of loose stones perhaps three feet in height and the date was late in autumn. The following spring, when the yuccas which had not been molested were sending up their asparagus-like flower stalks, this prostrate and supposedly dead comrade drew on the moisture and substance stored in its bulbous base and sent out a prostrate stalk about four feet in length with a full quota of blossoms. I do not know if it matured seed. It was a sight which brought to my mind that Negro spiritual, "These bones shall rise again!"

The yuccas are so easily transplanted or grown from seed that it seems strange that not more of them are seen as borders around domestic gardens; and I can testify, from personal experience, that it is intensely interesting to see the magical flower stalks pop up from plants that came from seed sown by one's own self years before.

CLARK GARDENS
CACTUS
AND
SUCCULENTS
at entrance to Raymond Hotel
1250 So. Fair Oaks Ave.
Pasadena, California

GENUS PTEROCACTUS SCHUMANN

By Dr. Arthur D. Houghton

This Argentinian genus is placed after Pereskiopsis chiefly by reason of its fruit being at the end of the branch. It is otherwise very distinct. Its species look like small types of cylindrical Opuntias. Its white seeds, the coats of which are prolonged into a disc-like wing or fried egg (it is this ring-like wing from which the genus is named; Pteron in Greek means wing) are unlike those of any other genus. Schumann says that the fruit has an operculum (a lid like a mustard pot) through which the seeds escape. If this statement which seems to need corroboration is true, it is a wonderful example of a biologically unsuccessful experiment. The operculum has not appeared in any other genus of the Cactaceae. The leaves are very small, caducous (soon falling off); the areoles are also caducous; the roots are tuberous; in P. hickenii moniliform (like beads on a string). In P. tuberosus the tubers are very large, five or six inches long and four inches in diameter; the glochids are small and caducous; the flowers are terminal (occupying the end of the branch) without a flower tube; the perianth segments (petals or sepals) are erect; the filaments and pistils are shorter than the petals; the ovary has numerous small clusters of spines; the fruit is dry; the embryo is curved.

This genus approaches the Opuntias through species like O. chaffeyi with large roots and short weak stems.

P.hickenii can be distinguished from the others by the narrowness of its seed wing, its moniliform tuber, and its spines which are three-quarters of an inch long. The other three species of the genus having broadly winged seeds with spines no longer than one-third of an inch.

P. fischeri with its strongly tuberculate stems closely resembles a Cylindropuntia (O. whipplei) except that the spines are not sheathed. Its radial spines are white (P. hickenii has yellow to brown) numerous, twelve or more, setaceous (bristle-like) spreading, quarter inch long; its central spines nearly half inch long, brownish; ovary tuberculate and spiny, hardly distinguishable from the stem, with a deep umbilicus (navel) at the top, bearing one large, flat winged seed.

P. pumilus and P. tuberosus differ from the two foregoing species in having scarcely tuberculate joints. P. pumilus has prostrate or somewhat ascending cylindric joints one-third of an inch in diameter, covered with weak spines appressed to the stem; the areoles are very woolly; the ovary is terminal, slightly umbilicate; few very thin seeds quarter of an inch in diameter.

Pterocactus tuberosus from Br. & R.

P. tuberosus can be told from P. pumilus because its ovary is covered with stiff spines, and the seed wing is one-twelfth of an inch wide; while in P. pumilus the ovary is densely covered with weak spines, and its seed wing is only half as wide. P. tuberosus has a large tuberous root which can easily be mistaken for that of Peniocereus gregii. Its terminal branches are turgid (swollen, full), purplish, up to sixteen inches long, ond one-third of an inch in diameter, more or less clavate (club-shaped); the areoles are numerous, small, with many small, white spines pressed closely to the stem; the petals are long, lanceolate, apiculate (terminating in a little point), yellow; fruit dry; seeds numerous, large, flat, nearly half inch in diameter.

Even a small consideration of this interesting distinct genus seems to show that it is one of evolution through Pereskia, Pereskiopsis to Pterocactus and then on to Opuntia.

I cannot think why Britton and Rose follow this genus with genus Nopalea; those master botanists undoubtedly had a good reason which I do not think they have stated. I intend to take the matter up with our worthy President emeritus, Dr. Britton; until these points are discussed and settled I shall follow Britton and Rose and speak of the genus Nopalea next.

THE GENUS QUIABENTIA Br. and R.

This is a monotypic (only one species) genus made by erecting Pereskia zehntneri into a new genus.

Its one species Quiabentia zehntneri Br. & R., is a much branched shrub, low and leafy; the

Quiabentia zehntneri from Br. & R.

branches usually in whorls. Its leaves are fleshy, flattened, stiff, borne at right angles to the stem; the areoles are large, white-felted, the upper part of the areoles bearing glochids; spines numerous, acicular and white; flowers at end of branches, two and a half to three and a half inches wide, bright red in November; petals broad, retuse (terminating in a round end the center of which is depressed); ovary borne in the upper end of the branch, very narrow, one and a half to two inches long, bearing the usual leaves, areoles and spines of the branches; fruit oblong to clavate, two to three inches long, finally without leaves, spines or bristles, sterile below, with thick fleshy walls and small narrow seed cavity; umbilicus (navel-like depression) broad, slightly depressed; seeds thick, one-fifth of an inch in diameter. Its flowers are related to Pereskia bahiensis while its glochids are related to Opuntia and excluded from the Pereskias. Its broad thick leaves resemble those of Pereskiopsis. In all, it is a good new genus.

This rare plant is found only on a small limestone mountain near Bom Jesus da Lapa, Brazil. It may be grown from seeds or cuttings. Dr. Rose brought this plant to the New York Botanical Garden in 1915. No specimens are known in western collections.

THE SECRETARY'S SPINAL COLUMN

By R. E. WILLIS

Speaking of "Spinal Columns," mine is not yet back to normal, since I moved some 1500 plants to the show in Pasadena and back again.

From a membership standpoint the show was a great success. We increased our membership *from 391 to 463. Let us all work to go over the* 500 mark before January 1st. The dues for the balance of 1929 are $1.00 for ordinary members, $5.00 for sustaining members and $100.00 for life members.

We were very fortunate in having with us dur*ing the show week, Mrs. E. A. Harris of San* Antonio, Texas. Mrs. Harris is one of our associate editors, her report of the show will appear in this issue.

No doubt a number of errors were made in the management of the show. The committee will be glad to receive letters of constructive criticism which will be of great benefit for the next show.

The executive board of the society wishes to express their appreciation to all who helped make the show a success by their donations, prizes, trophies, entries, work, and attendance.

In a recent issue of the Journal a list of Catalogues received by our Librarian was published, among which was one from Mr. Barrett of San Diego. Mr. Barrett received so many requests for catalogues and price lists that he could not make a personal answer to each and requests that an announcement be made that he is no longer in the business and has no catalogues for distribution.

The next meeting of the society will be held at the residence of Mrs. J. C. Beatty, 15951 Ventura Blvd., Los Angeles, Calif., at 2 P. M. September 29, 1929.

Mr. Carl Ackerman of 5350 Huntington Dr., Los Angeles, will donate the 3 plants to be raffled off to members present at the meeting and the one for a non-resident member. Just what these plants will be will be announced later. You may be sure they will be very nice ones.

While at the show Mr. West lost a pamphlet on the Yucca. Will the finder kindly mail to Mr. West or Secretary Willis.

RARE PLANT MARTIN
WHITTIER BLVD. AT 22ND ST.
MONTEBELLO

THE FIRST ANNUAL CACTUS SHOW

AUGUST 29, 30, 31

By MRS. E. A. HARRIS, *San Antonio, Texas*

The first exhibition ever held devoted in its entirety to cacti and their kindred succulents is now an accomplished fact. No one, however, who was fortunate enough to be among those present, could possibly say that it is entirely over, as the memory of each and every exhibit will stay with those who love these desert plants for many days to come, while the inanimate pictures of Britton and Rose, the succulent books of Alwin Berger, the scattered plants of fellow collectors (to say nothing of our own puny efforts), will be our only means of enjoyment and study. Every one of you who did not see the plants that had been gathered into this wonderful display by tireless collectors, missed a most interesting experience, to say nothing of the chance of coming in contact with the leading minds engaged in this fascinating hobby. The beautiful greenhouses of the Edward H. Rust Nurseries at Pasadena were put at the disposal of the Society for August 29, 30 and 31, but on account of the enthusiasm shown by the public in general and collectors in particular, Sunday, September 1st, found us all still taking notes and fingering our reference books among the cacti.

The outstanding exhibit, as to specimens displayed, condition, and staging was the collection of about sixty-five varieties of Euphorbias belonging to Mr. G. A. Frick. Each one of these rare plants of mostly African origin, were in excellent show condition, in fact, it is known that Mr. Frick has the finest collection of exhibition Euphorbias this side of their native land. There were especially fine examples of the following Euphorbias: grandicornis, natalensis, ledienii, neriifolia, ammak, neutra, bubalina, globosa, enneagona and many others. This exhibit occupied the center front of the greenhouse with the other part of Mr. Frick's collection running about half the length of the left side. The latter part comprised rare cacti from North and South America, among which were several specimens of Echinofossulocactus, Echinopsis, a Neomammillaria multiceps, a fine Coryphantha recurvata cristate, several species of Astrophytums, two fine plants of Lophocereus schottii and many others. Mr. Frick believes in concentrating on one or two branches of plant material and by care and intelligent devotion achieving results second to none.

The next collection in point of size and condition and with even a wider range of diversity and interest was that belonging to our many sided and talented Secretary, Mr. R. E. Willis. A very interesting group of Rhipsalis, both natural and beautifully grafted, vied with his fine collection of Euphorbias. Boxes of robust seedlings of rare cacti along with many pots of Mesembrianthemums, two huge Echinopsis, a fine example of Cephalocereus senilis, a large Opuntia cristate, a ruffled specimen of Euphorbia neriifolia cristate, and in fact, something fine of everything in the four books of Britton and Rose or what have you. This fine large collection gave evidence that our Secretary's "spinal column" had been in perfect adjustment for sometime even though a trifle bent from hard work during the show.

In speaking of the collection of our President, Dr. Arthur D. Houghton, it is really necessary to speak first of the collector. I'm sure there is nobody who can equal his powers of keen observation and his ability to collect and name rare varieties of cacti, and his collection did not disappoint those of his admirers who expected great things. There were no plants in the show that surpassed his Pachycereus pecten-aboriginum, Cephalocereus senilis, Cereus pugioniferus, C. azureus, C. galapagensis and many Mexican and South American plants of the Cereus type. In this display the Doctor had an extremely valuable collection of grafted cristates of rare varieties as well as the Pereskias of which he has so ably written. Other specimens displayed were Echinopsis variegata, Coryphantha sulcolanata, Coryphantha leucantha. A plant each of Epiphyllum anguliger and darrahii were placed side by side to aid the unwary to compare and differentiate.

Mr. F. Weinberg, who has the reputation of collecting and distributing many rare varieties lived up to this reputation. His large plants and cristates were displayed in the back of the greenhouse with an overflow into the yard. In the background was a large head of Echinocactus visnaga cristate, surrounded by crests of many Opuntias, F. wislizeni and others. In this group was an Echinocactus which Mr. Weinberg had named Echinocactus hertrichii, in honor of that famous gentleman, Mr. William Hertrich, director of the Huntington Gardens. In another part of the greenhouse Mr. Weinberg displayed the rarest Opuntias gathered into any collection I have yet seen. Turn to your Britton and Rose and look at the nice old Bolivian sheepherder

who looks as if he couldn't tell the difference be tween his woolly sheep and the mounds of white woolly Opuntia floccosa. O. floccosa was there as well as O. vestita, O. molesta, O. gosseliniana, O. decumbens and O. curassavica. Neomammillaria napina, Agave parvifolia and that plant which had been lost to collectors for forty years, Neomammillaria fasciculata, vied for interest and inspired acquisitiveness.

Colonel PerrieKewen showed himself no mean grafter. From the looks of the head of Euphorbia caput-medusae growing on a fine specimen of Euphorbia cereiformis I should say that he had received just returns from the generous and patient kindness that he radiates toward everything and everyone around him. Another achievement of Col. Kewen was a sturdy crest of grafted Echinopsis multiplex and a very beautifully grown Astrophytum ornatum.

Mr. James West of San Rafael brought down to the show through the vicissitudes of travel, a large pan of extremely intriguing examples of Silverskins or Argyroderma, thus proving to us more ignorant ones that he was not indulging his fancy in the wild adventures of botanical fiction in his article published in last month's Journal. Like the old lady at the circus who exclaimed on viewing the giraffe that there was "no sich animal" we marveled at the sculptural turn nature had taken in achieving these plants. Though nobody touched them, surely I believe one could not testify that they were real and growing.

There were no more enthusiastic workers and exhibitors than Mr. G. A. Frick's two boys, Karl and Bob, who showed many of us older members quite a few things. These young "offsets" displayed two beautifully potted and staged exhibits embracing their own collections of rare plants from seedlings and propagations to matured rare specimens. Karl Frick also displayed a model greenhouse filled with tiny pots of small cacti, while Bob's special, secured by grafting, was a chicken shaped Opuntia surrounded by a nest of eggs. Several other entertaining comedy layouts in the show were a desert prospector or cactus collector done entirely with cacti; also a most interesting Opuntia man with huge ears and eyes that caused the younger members of the Society much entertainment.

Dr. Jacolyn Manning achieved one of the most artistic exhibits of the show in her three colorful bowls of cacti. The first, a greyish-green bowl, was planted in green cacti with greyish-white thorns and white wool surrounded by greenish rocks. The second bowl in shades of reds and browns, and the third, in browns and tans reminded you of the very deserts themselves.

Miss Kate Sessions created a most realistic mountain side of grey-blue rocks planted with flat faced blue-green Aeonium tabulaeforme, which showed a deft hand and a love of truth in nature. Many tiny cactus gardens of Mexican houses and figures were seen on the benches of the greenhouse as well as beautifully planted bowls of cacti and succulents. The Overbrook Nursery showed an exceptionally fine bowl of blooming plants as well as fine examples of the following Echeveria, hoveyi, elegans, nobilis, claviformis, plicata, rosea grandis and other lovely unnamed varieties; our loyal member, Mr. Fred McKenny, of this nursery sold large pots of pink blooming Sedum spectabile at the close of the show for the benefit of the Society. Mrs. E. T. Stoddard showed what could be done in California in a year's time with a small rock garden showing Cephalocereus senilis, blooming Stapelias and other rare plants.

The Garden Club of South Pasadena entered a nice exhibit of well grown plants, the center of which was a green bowled succulent in a wrought iron stand designed to make interior decorators sit up and take notice. The McAfee Gardens staged a cactus and succulent collection called "An Old Fashioned Garden" which one might contend depended on "your age and years of previous servitude" to this hobby. If a prize had been offered for the popularity of exhibits the competition would have been keen between the water coolers of Sparklets, which were donated for the duration of the show by Mr. R. G. Fawcett, and the oasis of shaded benches offered in the restful patio exhibit of the Clark Gardens. The unusual heat of the week in Pasadena was fine for Euphorbias and Cacti but some of the more tender succulents were seen drooping and a constant stream of cactus enthusiasts migrated between the oases of water and shade.

Quite a new thing presented in an artistic way were the rock garden pools done in the Japanese manner by Mr. R. F. Kado, which must have been a pleasant surprise to succulents which thrive on damp air and seem to like being planted in the rocks in this artistic way.

Mrs. Lee Chamberlain laid out a very interesting rockery which would be an addition to any garden. H. P. Brochelle entered a well potted collection seconded very closely by Mrs. W. P. Herbert whose interesting plants were prettily but not so well potted, there being a ban on glazed pots for desert plants.

Individual plants of rareness and beauty carried off substantial prizes for many members of the Society. Miss M. E. Thompson presented the best grown head of Euphorbia resinifera seen in any of the Euphorbia collections. Mrs. F. Ghise's huge plant of Zygocactus truncatus made one

wish to be invited to see it bloom at Christmas time. Lee Chambers displayed a plant of Neomammillaria macdougalii which must have measured a foot across, also an interesting cactus from Johnson County, Oregon, which none of the experts could name. A tight mass of about fifty heads of Echinopsis was exhibited by Donald Kissinger. Mr. William Hess entered three interesting plants which were brought overland all the way from his home in Texas. They were in perfect condition, though two of these were grafted.

Mrs. Emma Frick brought the batting average of that ardent family up to 100% with three prize winning succulents. Mr. B. L. Sloane displayed a fine specimen of Pereskia godseffiana, while Mrs. Robert Smiley displayed a vigorous plant of Hylocereus guatemalensis. Mr. F. C. White of Florence, Arizona, created for the show many really interesting things such as vases, boxes and clocks of the tough woody fiber of the desert tree Opuntia whose wood is hard enough to take a high polish. Mr. Burton E. Gear also had a large exhibit of this desert product, with plant boxes, book ends and many other objects of art. A very pretty display was made by Mr. Geo. Shaeffer of the edible fruit of the Mexican Opuntia with jars of canned "desert apples," as well as piles of fresh fruit. The raising and shipping to eastern markets of this commodity has become quite a nice little industry with an active demand from people who enjoy this fruit's exotic flavor.

As to the more intellectual and artistic records of this cactus hobby, there were rare water colors depicting phases of cactus life, by Mrs. J. W. Estill. Mrs. Ellen Rooksby entered a collection of pictures, monthly publications and authoritative books of great interest and instruction to cactus fans. Quite a few well taken and nicely colored photographs of the desert and cactus life were displayed by Ethel Bailey Higgins. Earnest Williams wave us his best in a collection of very clear photographs of his views on the subject, which were of good botanical value. All past issues of the "Journal," the only magazine sponsored and conducted by the Society, were on display, bringing in many new subscribers. A record enrollment of new members in the Society was reported also; our secretary's fondest hopes of five hundred members by Christmas will surely be realized. J. A. Ekdom, with his intelligent boosting as manager of the show, successful exhibitor and general cactus enthusiast, helped lift the exhibition right over the top and fix the next one as an assured fact.

Mr. W.T. Beecroft entered a beautiful plant of Mammillaria hahniana and two other rare plants, and was rewarded by receiving the prize for the rarest plant in the show on the first named.

To go back, as we were always going back, to the collection of Epiphyllums belonging to Mr. H. M. Wegener, which filled the hearts of the collectors of these exotic flowering plants with marvel and admiration. Though not in flower at this time of year, the sturdy plants of E. strictum, E. stenopetalum made one long to see their rare blooms. Mary C. Woodward also exhibited a nice collection of Epiphyllums. One of the most beautiful sights of the whole exhibition was the Epiphyllum entered by the Overbrook Nursery, this plant towering ten feet high was covered with orchid-like flowers which opened just for the evenings of the show as if nature herself were showing her approval for those unselfish ones who worked so hard for the success of this pioneer project. Mr. Kegley, Mr. Clyde Hurley, Mr. Ed. Lawrence of the publicity end will you please stand with Mr. Vossburg, Mr. J. A. Ekdom, Mr. John Dinsmore, Mr. Sloane and the tireless officers of the Society, and take your curtain calls while the rest of us applaud. Of course by this time the reader who always wants to know how the thing "turned out" will know that the show was a huge success financially as well as botanically and though I'm probably giving the secrets of the finance officer away, I'm going to tell you that the Society is now on a still firmer foundation and that both the members and the subscribers of the Journal will reap the reward of the generous and unselfish labors of those who in many ways helped stake the first exhibit ever given, devoted entirely to cacti and succulents.

Among the many out of town members visiting the show were:

Mr. and Mrs. Harney of San Mateo Park.

Mr. James West of San Rafael.

Mr. W. P. Weston of Tracy.

Miss Katherine VanBenthem of San Francisco.

Miss Bessie Oswold of San Francisco.

Mr. and Mrs. William E. Hess of San Antonio.

Mr. and Mrs. Max Cohn of Los Gatos.

Mr. H. L. Bettencourt of San Leandro.

Miss Kate Sessions of San Diego.

Mr. J. A. Stromquist of San Diego.

Mr. and Mrs. McCabe of San Diego.

Mr. and Mrs. McKinney of Palm Springs.

Mr. E. O. Orpet of Santa Barbara.

LIST OF WINNERS

CACTUS AND SUCCULENT SOCIETY SHOW

AUGUST 29-SEPTEMBER 1, 1929

A1 SWEEPSTAKES.
1st. Mr. G. A. Frick. 2nd. Mr. R. E. Willis.
3rd. Dr. A. D. Houghton.

A2 BEST STAGED COLLECTION.
1st. Mr. H. B. Brochelle. 2nd. Mrs. W. P. Herbert.
3rd. Mr. John Dinsmore.

A3 BEST AND RAREST PLANT SHOWN.
1st. Mr. W. I. Beecroft. 2nd. Mr. W. Weinberg.
3rd. Mr. E. P. Bradbury.

A4 LARGEST COLLECTION OF CORRECTLY NAMED CACTI. 1st. Mr. J. A. Ekdom.

A5 LARGEST COLLECTION OF NAMED SUCCULENTS. 1st. Mr. J. A. Ekdom.

A6 LARGEST COLLECTION OF EUPHORBIA. 1st. Mr. J. A. Ekdom.

A7 BEST MINIATURE CACTUS AND SUCCULENT LANDSCAPE—*Amateur.*
1st. Mrs. E. T. Stoddard.

A8 BEST MINIATURE CACTUS AND SUCCULENT LANDSCAPE—*Professional.*
1st. Mr. R. F. Kado. 2nd. Mrs. R. B. Whitfield.
3rd. Mr. John Dinsmore.

A9 BEST CACTUS BOWL. *Amateur*
1st. Mr. H. P. Brochelle. 2nd. Mrs. M. W. Dieterich.
3rd. Dr. Grace Nickerson.

A10 BEST CACTUS BOWL. *Professional.*
1st. Overbrook Nursery. 2nd. Mrs. Helen McCabe.
3rd. Mr. F. Weinberg.

A11 BEST CACTUS BOWL. *Junior (under 18)* 1st. Karl Frick.

A12 BEST COLLECTION OF OPUNTIAS.
1st. Mr. F. Weinberg. 2nd. Mr. J. A. Ekdom.

A13 BEST COLLECTION OF CRISTATES. 1st. Mr. F. Weinberg.

A14 BEST COLLECTION OF GRAFTED PLANTS. 1st. Mr. J. A. Ekdom.

A15 BEST COLLECTION AND DEMONSTRATION OF SEEDLING GROWING.
1st. Mr. E. P. Bradbury. 2nd. Robert Frick.

A16 BEST COLLECTION OF ZYGOCACTUS AND SCHLUMBERGERA.
1st. Mr. Boyd L. Sloane.

A17 BEST COLLECTION OF MAMMILLARIAS, NEOMAMMILLARIAS AND CORYPHANTHAS. No entries.

A18 BEST COLLECTION OF ECHINOCACTOIDS. No entries.

A19 FINEST SPECIMEN ASTROPHYTUM. 1st. Robert Frick.
2nd. Karl Frick. 3rd. Mr. J. A. Ekdom.

A20 LARGEST COLLECTION OF NAMED EPIPHYLLUMS.
1st. Mr. H. M. Wegener. 2nd. Mrs. M. C. Woodard.

A21-a BEST COLLECTION OR SPECIMEN OF ANY OTHER GENUS OF CACTI.
1st. Overbrook Nursery. 2nd. Mr. C. D. Young.
3rd. Mr. Lee Chambers.

A21	ECHINOPSIS.	Mr. Donald Kissinger.			
A22	CARNEGIEA.	Mr. F. Weinberg.	A23	MAMMILLARIA.	Mr. F. Weinberg.
A24	CORYPHANTHA.	Mr. F. Weinberg.	A25	ECHINOCACTUS.	Mr. F. Weinberg.
A26	PHELLOSPERMA.	Mr. C. D. Young.	A27	ECHINOCEREUS.	Mr. C. D. Young.
A28	ZYGOCACTUS.	Mrs. F. Ghisi.	A29	HYLOCEREUS.	Mrs. Robert Smiley
A31	FEROCACTUS.	Mrs. M. W. Dieterich.			
A30	STROMBOCACTUS.	Mr. W. I. Beecroft.	A32	PHYLLOCACTUS.	Overbrook Nursery
A33	OPUNTIA.	Miss Bertha de Lecuona.			
A34	UNCLASSIFIED.	Mr. Lee Chambers.	A36	CEPHALOCEREUS.	Col. Perrie Kewen.
A35	NYCTOCEREUS.	Mrs. Henry Lewis.	A37	PERESKIA.	Mr. Boyd L. Sloane

B1-a BEST COLLECTION OR SPECIMEN OF ANY OTHER GENUS OR SUCCULENT.
1st. Mr. R. E. Hess. 2nd. Miss K. O. Sessions.
3rd. Mrs. C. H. Loose.

B1	EUPHORBIA.	Miss M. E. Thompson.	B2	BRYOPHYLLUM.	Mrs. C. H. Loose.
B3	KLEINIA.	Mrs. C. H. Loose.	B4	AGAVE.	Miss M. E. Thompson.
B5	KALANCHOE.	Mr. J. A. Ekdom.	B6	AEONIUM.	Miss Kate O. Sessions.
B7	DUDLEYA.	Miss Kate O. Sessions.	B8	ECHEVERIA.	Miss Kate O. Sessions.
B9	GASTERIA.	Mrs. E. R. Frick.	B10	ALOE.	Mrs. E. R. Frick.
B11	STAPELIA.	Mr. R. E. Hess.	B12	SEDUM.	Mr. J. R. Brown.
B13	SEMPERVIVUM	Mr. C. H. Pfadenhauer.	B14	RHIPSALIS.	Mr. R. E. Hess.

B15 GRAFTED EUPHORBIA. Col. Perrie Kewen.
C2 BEST COMEDY LAYOUT. 1st. Robert Frick.
D1 BEST WOMAN'S CLUB EXHIBIT. No entries.
D2 BEST JUNIOR. *(Under 18).*
1st. Karl Frick. 2nd. Robert Frick.
E BEST EXHIBIT OF CACTUS GROWING AND HANDLING AIDS, SPECIAL TOOLS.
No entries.
F BEST COLLECTION OF PLANTS WITH REGARDS TO FANCY POTS OR CONTAINERS. 1st. Overbrook Nursery.
2nd. Mr. F. Weinberg. 3rd. Mrs. H. P. Herbert.
G COLLECTION OF INSECT PESTS AND PARASITES, INIMICAL MOULDS AND FUNGI. Blue Ribbon. Los Angeles County Horticultural Commission.
H BEST DISPLAY OF METHODS OF PROPAGATION OF CACTI AND SUCCULENTS
1st. Robert Frick.
1 BEST COMMERCIAL EXHIBIT—PATIOS. 1st. Clark Gardens.

SPECIAL AWARDS

Karl Frick—Miniature Greenhouse.
South Pasadena Garden Club—Collection of Cacti and Succulents.
Pasadena Community Garden Forum—Educational Exhibit.
Dr. Jacolyn Manning—Desert Gardens.
Dr. Grace Nickerson—Collection of Cacti Photographs; Articles of Cactus Wood.
Mrs H. M. Wegener—Paintings of Epiphyllum Blooms.
Ethel Bailey Higgins—Hand tinted photos of cacti.
Mrs. John W. Estill—Collection of water color studies of cacti.
Mr. Burton E. Gear—Useful and decorative articles of cactus wood.
Mr. George Shaeffer—Cactus Fruit.
Agricultural Commissioner of L. A. County—Educational Exhibit.
Wilshire Rockcraft and Desert Gardens—Informal Pool.
Mrs. Lee Chamberlain—Desert Landscape.
Palm Springs Desert Nursery—Collection of Cacti.
McAfee Gardens—Collection of Succulents.

JUDGES Mr. William Hertrich Mr. James West Mr. Fritz Berger
Boyd L. Sloane, *Secretary to the Judges.*

LIST OF EXHIBITORS

1. Robert Frick, 5922 Tipton Way, Los Angeles.....Plants
2. Mrs. T. N. Coleman, 5146 Angeles Mesa, Los Angeles.....Plants
3. J. A. Ekdom, 1266 El Mirador Dr., Pasadena.....Plants
4. Mrs. L. Kidson, 1238 Rimpau Blvd., Los Angeles.....Fy. pts.
5. Karl Frick, 5922 Tipton Way, Los Angeles.....Bowls
6. Miss A. L. Freeman, 1476 Colorado Blvd., Eagle Rock.....Plants
7. Mrs. C. H. Loose, 378 W. Mendocino St., Altadena.....Plants
8. Miss M. E. Thompson, 11515 S. Broadway, Los Angeles.....Plants
9. Donald Kissinger, Montebello.....Plants

10. Dr. S. L. Bettis, 598 Prescott St., Pasadena.....Plants
11. Pasadena Community Garden Forum, Library, Pasadena.....Education
12. F. Weinberg, 120 Gates Avenue, Los Angeles.....Plants
13. H. P. Brochelle, 1915 Cerro Gordo, Los Angeles.....Plants
14. John Dinsmore, 229 Fifth Street, Montebello.....Plants
15. Dr. Jacolyn Manning, 187 N. Craig, Pasadena.....Bowls
16. Miss Kate Sessions, Box 86, Pacific Beach.....Plants
17. Mrs. E. R. Frick, 5922 Tipton Way, Los Angeles.....Plants
18. Frank Bemus, 2705 Victoria Drive, Laguna.....Bowl
19. Miss Hazel Bemus, 2705 Victoria Drive, Laguna.....Bowl
20. Mrs. E. T. Stoddard, Whittier.....Landscape
21. Mrs. W. P. Herbert, 620 San Lorenzo, Santa Monica.....Plants
22. Mrs. W. B. Hiett, 2114 Buckingham Rd., Los Angeles.....Comedy
23. C. D. Young, Cabazon, Cal.....Plants
24. B. L. Sloane, 1421 Dominion Ave., Pasadena.....Plants
25. Mrs. M. C. Woodard, San Rafael, Cal.....Plants
26. Dr. Grace Nickerson, 1646 Elevado Dr., Los Angeles.....Plants
27. Mrs. G. W. Beahm, Box 13, Lamanda Park.....Plants
28. Mrs. R. A. Chapman, 3366 N. Marengo Ave., Pasadena.....Plants
29. Mrs. F. Ghisi, 224 N. Hancock St., Los Angeles.....Plants
30. E. P. Bradbury, Fontana, Cal.....Plants
31. Mrs. R. B. Whitfield, Riverside, Cal.....Landscape
32. South Pasadena Garden Club.....Plants
33. H. M. Wegener, 112 E. 24th St., Los Angeles.....Plants
34. J. R. Brown, Rust Nursery.....Plants
35. C. H. Pfadenhauer, 2076 N. Raymond Ave., Pasadena.....Plants
36. Mrs. Robert Smiley.....Plants
37. W. I. Beecroft, Escondido, Cal.....Plants
38. Mrs. Helen McCabe, 6721 Imperial Ave., San Diego.....Bowl
39. R. F. Kado, 2914 Wilshire Blvd., Los Angeles.....Landscape
40. Mrs. M. W. Dieterich, 100 N. Coronado, Los Angeles.....Plants
41. Mrs. J. de Lecuona, 1720 S. Kingsley Dr., Los Angeles.....Plants
42. Miss Bertha de Lecuona, 1720 S. Kingsley Dr., Los Angeles.....Plants
43. Lee Chambers, Eagle Rock.....Plants
44. Overbrook Nursery, 9015 Sunset Blvd., W. Hollywood.....Plants
45. Mrs. M. C. Drisko, 2511 Hermosa Dr., Verdugo Woodlands.....Plants
46. Col. Perrie Kewen, 1243 Brunswick Rd., S. Pasadena.....Plants
47. Clark Gardens, 1250 S. Fair Oaks, Pasadena.....Patio
48. McAfee Gardens, 650 N. San Gabriel Blvd., San Gabriel.....Patio
49. Wilshire Rockcrafts and Cactus Gardens, 2914 Wilshire Blvd., Los Angeles.....Pool
50. Geo. B. Shaeffer, R.F.D. Box 1410, Tujunga.....Fruit
51. Mrs. John W. Estill, 865 Kensington Rd., Los Angeles.....Picture
52. Agricultural Com. of L. A., Los Angeles.....Educational
53. Burton E. Gear, 1912 Ocean View, Los Angeles.....Merchandise
54. Ethel Bailey Higgins, 2228 Kettner Blvd., San Diego.....Pictures
55. Mrs. H. M. Wegener, 112 E. 24th Street, Los Angeles.....Pictures
56. Mrs. Henry Lewis, 319 N. Center St., Baldwin Park.....Plants
57. Dr. A. D. Houghton, 11224 Chatsworth Dr., San Fernando.....Plants
58. R. E. Willis, 2721 Bellevue Ave., Los Angeles.....Plants
59. G. A. Frick, 1800 Marengo St., Los Angeles.....Plants
61. Mrs. Lee Chamberlain, 401 N. Vermont Avenue, Los Angeles.....Landscape
62. Mr. R. E. Hess, San Antonio, Texas.....Plants
63. Desert Nursery, Palm Springs.....Plants

134 entries—63 exhibitors.

BOYD L. SLOANE,

Secretary to the Judges.

PENIOCEREUS GREGGII

By MATT O. BENSCOE, *Florence, Ariz.*

Reprinted through the courtesy of "Progressive Arizona and the Great Southwest"

Among the many rare and beautiful treasures which are found growing on the deserts of the Southwest, perhaps the most beautiful and unusual is the Peniocereus greggii, known to the native Indians and Mexicans as the Saramatraca. It is ordinarily found growing in a secluded clump of bushes or mesquite at an altitude of from one thousand to three thousand five hundred feet. Though growing quite profusely in some sections, to the average layman, it is a difficult task to find these gorgeous flowers of the desert due to their peculiarities. Their appearance, with the exception of being a little finer and more delicate, is much like many other species of cacti which grow in this part of the country, so that it does not reveal its rare beauty and fragrance only at blossoming time, and its blooming at night makes it all the more difficult to locate. Many who have lived in the Southwest all of their lives have never seen this marvelous plant, and perhaps would not recognize it if found by them. Most of the Indians are quite familiar with it, and frequently use its bulb for medicinal purposes.

A splendid specimen of the Peniocereus Greggii

P. greggii grows from a tuber, the color of which is similar to that of a sweet potato, the shape resembling a huge stubby carrot. In size these bulbs vary, some of them being as small as the end of a finger, other as large as a water bucket. These bulbs are extremely hardy and are frequently found with scars caused by rodents of the desert eating into them, though even this seldom destroys the growth of the plant. From the evidence gained we derive that they are not a savory dish for the rodents, else the bulbs would be completely devoured, living up to the rules of the desert life. The bulbs are generally buried from four to six inches in the ground, and at times when near a wash or arroyo the top will become exposed, which is not conducive to its growth.

The Peniocereus grows from two to four feet in height, and has a number of branches. The age of a plant is largely determined by the num-

Continued on Page 17

WEGENER AND CHAPMAN GARDENS

By Dr. Grace P. Nickerson

When requested to call and report on the cactus garden of a Mr. Wegener at 212 East 24th St., Los Angeles, my curiosity was aroused. Thought I, garden space is limited in that part of the city, what can be there that would be of interest to the readers of the Journal of the Cactus and Succulent Society of America? I cannot say which appealed to me most, the beauty of the blossoms or the spirit of the garden. So small, yet so interesting. A cool, shady refuge place from the dizzy world outside. A place where people live—where the soft cooing of doves is heard in place of the

Epiphyllum stenopetalum

modern jazz—here a carefully layed tea table invites one to linger—I hope all readers of this article may sometime visit this garden—especially in blossom time, late April, May or June.

The garden walls are covered with various free blooming, trailing, clambering and climbing cactus. I do not believe a single blossom escapes Mr. Wegener and his good wife's attention. They reported that one seven-year-old Harrisia martinii put forth more than twenty-five hundred blossoms in one season, April to November.

Most of Mr. Wegener's plants are of the Epiphyllanae, subtribe of the Cereeae tribe. He has specialized in Epiphyllums for many years and has mastered, through experience, the culture of these beautiful plants. His collection numbers over eighty varieties and contains many rare plants, some of which he propagated most successfully, creating new varieties of his own.

In connection with his work with the Smithsonian Institute, Washington, D. C., Mr. Wegener produced fifteen blossoms on a plant, compared with a similar one in Washington which produced but one blossom. Very modestly he attributes this partly to the California climate and maintains that this wonderful country should possess a botanic garden such as could not be duplicated anywhere in the world.

Mr. Wegener has found that proper soil, moisture, and exposure are equally important in the culture of Epiphyllum. He uses one-third sand, one-third loam and one-sixth sawdust (to retain the moisture) and one-sixth well rotted fertilizer and finds it a very proper mixture.

Mr. Wegener says, Epiphyllums, being of tropical nature, require more water than other varieties of cacti and should be well irrigated, followed by frequent cultivation. Although most of his plants are acclimated to the open ground, best results are obtained from potting, since exposure is more easily regulated. Sliding frames overhead protect the plants from cold in winter and excessive sunrays in summer, yet they can be removed to get full advantage of the light when desired. No rule can be laid down for exposure of all plants since some will make progress in the sun while others do better in the shade. Mrs. Wegener says, one important fact to remember, in the culture of the Epiphyllums is to give the plant rest and but little water during the dormant period after blooming. If small plants appear to be dying after blooming, do not be alarmed, shade them for about a month and they will begin rejuvention. The more delicate the color of the flower the more the plant seems to suffer from blossoming.

Some varieties of Epiphyllum have ragged edges and even holes in their leaves; this is characteristic and should cause no anxiety.

Growers of Epiphyllum must ever be alert with a spray of Volck as these plants are especially susceptible to parasites. By giving the plants good care one will be amply repaid by beautiful blossoms.

Mr. Wegener's garden should be an inspiration to all who see it. He has overcome many adverse conditions and produced plants and flowers which are doubtless equal to those of the tropics. The better known Epiphyllums found in Mr. Wegener's garden are E. hookeri, E. cartagense, E. stenopetalum, E. crenatum and many others not so well known.

Far up in Altadena, nestling close to the foot

of a mountain, surrounded by spacious grounds with many grand old trees scattered about, lies the home of Mr. and Mrs. Ralph A. Chapman. Almost any plant bearing a flower may be found there, but particular attention has been given to *Cacti and Succulents. A lath house, usually con-*

A Natural Greenhouse

sidered necessary for good results with such plants, is not needed there as the lacy foliage of pine and pepper trees give just the right amount of sunshine and shade for Mesembryanthemums, Sedums, Echeverias, Epiphyllums, Schlumbergera gaertneri and Rhipsalis cereuscula growing in the rockeries built about the trees.

Mrs. Chapman has many plants in her large collection but there are three plants of which she is justifiably proud. One is a very large Rhipsalis cereuscula which hangs down at least thirty inches from the top of the pot with many new upright shoots; another is an Epiphyllum which has unusually long leaf-like branches upon one of which there were fifteen large blooms all at the same time; the third, her largest Schlumbergera gaertneri which produced over three hundred blossoms during this past blooming season.

When asked what particular care she gave them she replied, "None, water occasionally, that is all." Her success must be due to natural, normal conditions for these plants.

THE NOVICE DIRECTORY OF CACTI AND SUCCULENTS

By Col. Perrie Kewen

Rat Tail	Aporocactus flagelliformis
Cow's Tongue	Opuntia linguiformis
Barrel Cactus	Ferocactus acanthodes
Old Man	Cephalocereus senilis
Bishop's Hood	Astrophytum myriostigma
Snow on the Mountain	Neomammillaria plumosa
Grizzly Bear	Opuntia erinacea
Mescal Button	Lophophora williamsii
Beaver's Tail	Opuntia basilaris
Buck Horn	Opuntia fragilis
Turk's Head	Ferocactus viridescens
Turk's Cap	Cactus lemairei
Fish Hook	Phellosperma tetrancistra
Devil's Tongue	All Agaves
Finger Cactus	Opuntia ramosissima
Tiger's Mouth	Mesembrianthemum tigrinum
Hedge Hog	Echinocereus engelmannii
Prickly Pear	Opuntia occidentalis
Mule Cactus	Ferocactus wislizenii
Queen of the Night	Selenicereus grandiflorus
Candle Cactus	Opuntia kleiniae
Strawberry Cactus	Neomammillaria dioica
Strawberry Pear	Hylocereus undatus
Elephant's Ear	Opuntia tuna
Sweet Potato Cactus	Peniocereus greggii
Devil's Pin Cushion	Echinocactus grusonii
Giant Cactus	Carnegiea gigantea
Button Cactus	Epithelantha micromeris
Sea Urchin	Astrophytum asterias
Fox Tail	Opuntia bigelovii
Nigger Head	Homalocephala texensis
Caterpillar Cactus	Machaerocereus eruca
Tree Cactus	Opuntia arborescens
Living Rock	Ariocarpus fissuratus
Devil's Big Toe	Ferocactus johnsonii
Crab Cactus	Zygocactus truncatus
Christmas Cactus	Schlumbergera gaertneri
Chain Cactus	Schlumbergera gaertneri
Pipe Organ	Pachycereus marginatus
Snake Cactus	Nyctocereus serpentinus

Milk Weed.....Any Euphorbia
Night Blooming Cereus..Any one of the great number of cactus plants that bloom at night
Thimble Cactus .....*Neomammillaria fragilis*
Pin Cushion Cactus.....Neomammillaria macdougalii
Rainbow .....Echinocereus rigidissimus
The Blue Blade.....Opuntia santa-rita

And even collectors of long standing will call Euphorbia splendens, Crown of Thorns.

Send in others to add to this list so that it will be more complete.—Ed.

LETTER TO EDITOR

Referring to the answer "given to the question" of the various Ferocacti in your July number, a few words as to my observation and opinion may not be amiss.

First, you say the only recognized reference book is "Monographia Cactaceae" by Britton and Rose, and in the same breath you say the earlier name (by which I suppose you mean priority) is always right. Why such paradox statements? What is your reason, or what gives you the right to state with such emphasis, "the earlier name is always right?"

On the other hand, if such should be the case, why did Britton and Rose create such a lot of new names? It is my sincere belief that Britton and Rose followed no set rules in their naming of plants, but wherever they saw fit perhaps for reasons of their own, they quote priority on one plant and give it a new name on another, by which such a chaos was created that even the authors themselves could not name a plant by the new name when seeing it. Probatum est!

From olden time on, most any cactus amateur has known that Echinocactus means Hedgehog Cactus. How many know today what a Ferocactus is? On the other hand, I do not quite comprehend how "Fero" could be applied to a cactus plant. Fero, tuli, latum-fero means: carrying or bringing. If "Echinocactus" had been renamed "Spinoferocactus" you could perhaps translate same to mean: a cactus which carries strong or robust spines.

You state E. C. cylindraceus should be called E. C. acanthodes because the former was named by Engelmann in 1856 and the latter was named by Lemaire in 1839, and the earlier name is always right.

If the situation had been more carefully studied instead of merely accepting the statement of Britton and Rose, you would have come to the following conclusion:

In 1839 there were very few white people in the state of California, perhaps not as many in the whole state as there are today in a medium sized California City, and those people at that time certainly had other things to do than to bother themselves with collecting and shipping cacti to foreign countries.

At the time when the United States and Mexican boundary survey was conducted, numerous plants, as well as animals and birds, were collected for scientific purposes, and plant life, in most instances, were shipped to Shaw's Botanical Garden, St. Louis, Mo., which at that time was perhaps the only botanical garden of recognized standing in the United Ctates.

Among those plants collected enroute to California between Yuma and San Diego were a number of various cacti which were shipped to Prof. Dr. Engelmann, who at that time was director of Shaw's Botanical Garden. Among those cacti was one which Engelmann described as coming from California (Parry, 1850), and named it "Echinocactus cylindraceus": Syn. Cact. 275 (1856).

Charles Lemaire, a Frenchman, lived most of his time in Belgium, and was editor of the "Flores des serres." He also was a great lover of cactus and described and named many varieties. Being known as such in his time, many of the seafaring vessels which had their home port at Antwerp brought him numerous plants from foreign countries, among which was one which he described in 1839 as coming from Lower California (Baja Calif.) and named it Echinocactus acanthodes.

Consequently, the one from Lower (Baja) California, Mexico, and the one from California, U.S., cannot be one and the same identical plant. The description of the plant by Lemaire being in Latin only, is rather meager. Also "acanthodes" is Latin and translated means "bear's claws," a name which certainly would not fit the spine arrangement of E. C. cylindraceus. A bear has no twisted claws. Furthermore, on my last collecting trip into Lower (Baja) California, as far south as S. Rosario and San Fernando, I did not see one plant of E. C. cylindraceus. However, I have seen and collected plants* which at first sight looked very much like E. C. pilosus, and which in time to come may prove to be the true E. C. acanthodes. There will be another expedi-

tion into Lower California next March, which will bring more light on this subject and perhaps settle the question.

If you put so much stress or weight onto priority, Ferocactus Rostii may, by closer study, turn out to be E. C. Emoryi var. chrysacantha, Hort. However, I, for myself, do not believe very much in the personal Hortenses.

Echinocactus lecontei I should judge to be very easy to distinguish from E. C. wislizenii. The latter has hooked spines like a fishhook, whereas the former has very long and mostly twisted spines (but never fishhook-like spines) which cover the plant in all directions close to the body. It is nicknamed "Devil's Pin Cushion."

W. WEINBERG.

*All those cacti and succulents were collected for and shipped to the Munich Botanical Garden, Germany.

We would appreciate further comments on the above so that we may come to a general understanding.—Ed.

IN MEMORIAM

CHARLES C. ABRAHAM

Charles Abraham is gone. With him closes a chapter in the horticultural history of San Francisco and California. His nursery at 1630 Greenwich Street was for decades the meeting place of all those who took an interest in the unusual and rare in plant-life. There was hardly a plant one could name which had not, at one time or another, been grown by him. If you found anything out of the ordinary in a friend's garden and asked where it came from, the answer, almost invariably, would be: "From Abraham's."

There may be said to have existed a sort of invisible bond of fellowship between those that knew and appreciated him and his plants, a sort of unorganized Society of the Friends of Charles Abraham. If you discovered any one to be a friend of Charles Abraham, you might be pretty sure to find some one of congenial tastes, some one whose interest went deeper than a superficial admiration of pretty flowers.

To us Cactus and Succulent collectors he will, of course, be best remembered as one of the first and oldest collectors in California. Although his earliest interests lay in another field, that of Orchids, Begonias and Ferns, and he did not take up the growing of succulent plants until the middle of the nineties, he was from then on the most enthusiastic of collectors, and that in a day when such were few and far between. Up to the very last no one took more delight in discovering and acquiring some new species than he.

Although a buyer and seller of plants by profession, he was a real collector, in that a cherished plant, that could not easily be duplicated, was dearer to him than any money he might get for it.

Abraham, the man, was a most delightful, if sometimes crusty personality. His appreciation of a person was entirely conditioned on that person's capacity to properly value his treasures, and not at all on rank or wealth. While many of his closest friends were men and women of position and importance in the world, he did not measure people with the scale of the snob. He was entirely capable of letting some important and lucrative, but, to him, uninteresting customer wait indefinitely, while he made the rounds of his garden with an unremunerative botanical enthusiast.

His place had a charm all its own. One came through the little gate in the picket-fence into what was, in effect, more a garden than a nursery, bearing the stamp of its owner's mind. Rare and curious things of his own planting were dotted about here and there. An old stone bench, a small pool, a Japanese lantern, a vase, were placed without the slightest obtrusiveness. The whole place had the charm of the unobvious, nothing glaring or conspicuous, everything seeming to belong where it stood and to have grown there naturally.

The house in which he lived, low and homelike, was almost invisible beneath its covering of vines. Even the greenhouses, old and out-of-date as they may have been, seemed to fit into the landscape. The ancient windmill which pumped the water from his well was a landmark; for months after the great fire, it was the water-supply for the whole district.

And interesting things wherever you looked. Here the turquoise of Gentiana Farreri gleaming from beneath the shadow of a bush, there the huge downy rosette of Sempervivum canariense growing from a wall. The rock garden, on the right hand of the path as one came in, was sacred to the Succulents and Cacti. There were Dudleyas from all over California, Sedums in endless variety, here and there a rare Agave crowded by a patch of Echeverias, a large arborescent Opuntia and tall Cerei in the background.

And as long as daylight lasted, you might expect to see the master's strong, stocky body, a worker's body, surmounted by the fine intellectual head of an idealist, busy about his plants.

A picture that always comes to mind is that of Charles Abraham in the twilight of a summer evening, clad in an old pair of overalls, on his

knees before a sick Opuntia basilaris, lovingly doctoring the plant with some compound of his own devising.

A few biographical details will be of interest. Charles Christian Abraham was born on October 30, 1851, on the shores of the Baltic, in the little town of Eckernfoerde in Schleswig-Holstein. His horticultural education began at the early age of 15, when he went to work in the town cemetery, to be a plantsman thenceforward for 63 years. He then served an apprenticeship in a nursery, and at 19, went to Hamburg to enter the employ of one of the large growers. Later he went to Dresden, thence to Russia as gardener to a princely family.

His brother having emigrated to California, he was induced to follow, and came to this state in February, 1877. His first employment was at Ludemann's nursery in San Francisco. Later he went to Sacramento, when he sent for his mother, for whom he had an intense love and admiration. In 1880 he acquired a stall in the famous old California Market in San Francisco, in those days a rendezvous of the wealth and fashion of the city. There he first met many of the prominent people who were to become his life-long customers and faithful friends.

In 1881 he started his first nursery, at Pierce and Union Street, whence he moved, five years later, to his final location at Greenwich and Franklin.

The long-drawn illness which was the cause of his death was the first in a long and healthy life. He passed away on August 24, 1929.

It has been suggested that an enclosed space in Golden Gate Park should be set aside as a Charles Abraham Memorial Garden, and planted with the best and rarest things from his own garden.

No more fitting memento, nor one that would have pleased him more, could be imagined.

JAMES WEST.

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PENIOCEREUS GREGII

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ber of branches found on each stem. Under favorable conditions the stems of the Peniocereus, when given more water than the rain affords and if well protected and shaded, will attain a height of five or six feet.

Blossoms of the Peniocereus plants resemble to a great extent the tuberose, with the fragrance of the trailing arbutus. The coloring of these blooms is nearly always lavender, with a pure white tip. They are extremely fragrant and when a number of the blossoms bloom the same evening, the surrounding atmosphere is a paradise of perfume. When there are more than three or four blossoms on a plant they do not all bloom the same night. The Peniocereus rarely has more than six or eight blossoms on a plant, however, on very rare occasions, it has been known to have twenty. The stem of such a plant has reached the height of six feet.

The blossoms are really the extensions of a prickly stem about four inches long, and commence to open about an hour before sunset and close soon after sunrise. They bloom only one night in each year, that night occurring from the twentieth of May to the first of July. A common belief is that they bloom all on the same night, that night being the twentieth of June.

Few of the flowers become fertilized, probably because insects have so little daylight for pollenizing. Those which do become fertile bear a red fruit about the size of a small apple, very much prized by Indians for their delicious flavor. After a rainy Spring, the fruit seems to be much more abundant.

Perhaps it is well that these plants are secluded in their native state. Inasmuch as they are easily transplanted, were they easily found, they would soon be carried away to private gardens, and the desert would lose some of its rare beauty.

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